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52  
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THE

# CHEMIST



DECEMBER, 1947

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VOLUME XXIV, No. 12

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(See Page 518)

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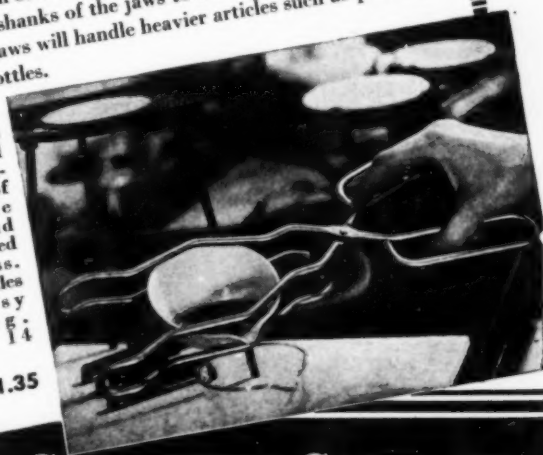
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# *The Chemist*

*Publication of*

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## IN THIS ISSUE

|  | Page |
|--|------|
| <b>Chemistry—A Trade or a Profession</b> .....                                   | 499  |
| <b>Outlook for the Chemist</b> .....   | 503  |
| <b>Join The American Institute of Chemists</b> .....                             | 509  |
| <b>Government Takes Over Industry's Top Role in<br/>Financing Research</b> ..... | 513  |
| <b>Necrology</b> .....   | 518  |
| <b>Council</b> .....   | 523  |
| <b>Chapters</b> .....  | 527  |
| <b>Comment</b> .....   | 529  |
| <b>For Your Library</b> .....  | 531  |
| <b>Chemical Condensates</b> .....  | 538  |
| <b>Professional Services</b> .....   | 539  |

### SCHEDULED FOR EARLY ISSUES OF THE CHEMIST

"The Ethics of the Research Worker," Louis Elsberg Wise

"Opportunities in Chemical Market Research," John P. Duane

"Research Requires an Organized Plan," Dr. M. L. Crossley

"Problems of the Younger Chemists," C. P. Neidig.

"Early History of the A.I.C." Dr. Lloyd Van Doren.

"Visit to a Flax Paper Mill."

Report of the Chicago A.I.C. Chapter Committee on Professional and Economic Status.

Other articles of professional interest.

### SPECIAL ISSUE

The May, 1948, issue of THE CHEMIST will commemorate the Silver Anniversary Year of THE AMERICAN INSTITUTE OF CHEMISTS. Special features are planned for this number.

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# Chemistry— A Trade or a Profession?

**Dr. Foster Dee Snell, F.A.I.C.**

*Foster D. Snell, Inc., 29 W. 15th Street, New York, N. Y.*

(Presented at the joint A.I.C.—A.C.S. meeting, Utica, N.Y., November 8th)

ONE usually presents either an abstract of a paper at the start or a set of conclusions at the end. As an abstract, my thesis is that chemistry was a trade and is now nearly, if not quite, a profession.

When two people disagree, nine times out of ten it is based on a matter of definition. The tenth time it is a difference of fact. So right at the start, the term profession is used as meaning one of the learned professions. The dictionary defines profession so broadly as to barely exclude laborers, mechanics, and farmers.

As an activity of the alchemists, the term trade would certainly be proper. Aside from more indefinite activities, they made—under more ancient names—sulfuric acid and copper sulfate, and alum, and a number of other things. Theirs was the day of mystery, which a few branches of semi-chemical industry try to perpetuate in the present era.

As the art developed, we had the period when chemistry consisted of the marshaling of a great number of largely unrelated facts. That was often quite properly described as de-



scriptive chemistry. There are people with only a modest amount of grey hair or baldness who studied chemistry of that type, before the days when theoretical chemistry had tied facts together in compact bundles with strings of general theory applicable to the entire field. That was a transition stage when the trade was collecting a background to become a profession.

THE AMERICAN INSTITUTE OF CHEMISTS was formed to represent the profession of chemistry during the latter part of that transition stage.

One often encounters confusion between the subjects of chemistry as a profession and the economic status of people practicing chemistry. Broadly speaking, there is no reason why a profession is better paid than a trade. Thus a highly paid captain of a multi-engine air liner can hardly be designated as a professional man. Rather he practices a trade as the term is usually construed. But an anthropologist will seldom receive the income of that air-line pilot. So it should be stressed that while improvement of professional status may bring, long after, an improvement in economic status, the two are not parallel and may not even be cause and effect. Rather, economic status is a measure of public recognition of the importance to that public of what a man is doing. Everything which makes the public research-conscious also makes for improvement in economic status.

### Qualifications

A profession appears to have five definite qualifications.

1. It is a matter of mental rather than physical labor. So it is distinguished from mere skill at any level—that of a watchmaker for example.

2. It requires a relatively long period of academic training and is thereby distinguished from the trades which are still often learned under an apprentice system.

3. The results of the profession are expressed in words spread in the air or on paper, thus distinguishing

the professional engineer from the draftsman.

4. A degree of confidence is reposed in the professional man which entrusts him with confidential facts or data, thereby distinguishing a profession from such trades as dress design or sign painting.

5. Finally, it is customary for the representatives of a profession to have some indication from a governmental agency of his qualifications to practice the profession.

No clear distinction is made between chemists and chemical engineers. The same man may one week be engaged in heat transfer by putting a beaker over a Bunsen flame for a purpose; the next week in pilot plant investigation of the same reaction in a glass-lined steam kettle, and a few months later in designing equipment for making multi-ton batches in commercial equipment. Somewhere along that path in most States he crosses a dividing line between those who cannot at present be licensed and those who must be. There are interesting complications in the licensing of engineers by the State of New York, in that there are engineering test data supplied by people who avoid licensing as engineers by contending that they are only chemists. Such complications were part of the background of one of the licensing acts submitted in New York a few years ago.

Chemistry as a profession has had two periods of rapid progress, the two

## CHEMISTRY—A TRADE OR A PROFESSION

world wars. Before World War I, it was largely a trade. The INSTITUTE you will recognize, came along right after the war. World War II further showed the importance of the profession, somewhat scrambled with physics to the left and engineering to the right—left and right there having no political implications!

Probably the number of people in the profession of chemistry has as much to do with the recognition of its importance as any one factor. This is not a place for statistics, but you know that chemists have been increasing not only numerically but percentage-wise.

### Licensure

Trades are sometimes licensed, an example being barbers. Professions are not always licensed, an example being the ministry. Professions are usually licensed, trades usually not. Licensing is designed to protect the public from people who represent themselves as qualified when they are not or (and note the correlative) from persons who are qualified but do not practice the profession ethically. The cases where the doctor or lawyer practices unethically are too well-known to require citation and they do lead to the ousting of the unethical practitioner. A man without qualifications who recently practiced chemistry in California leading to an explosion of perchloric acid with substantial loss of life did many things to injure the public at a distance from

the blast. An example is the multiplication by a large factor of some insurance rates for explosion insurance. Such an incident might readily lead to hastily conceived licensing which might not be well drawn.

But time will not permit citation of examples at length. There are chemists who take money from the public for making investigations for which they are not qualified. That does lead to a bad name for our profession. We can do nothing about it at present.

As chemistry continues to grow, at some level licensing appears to be inevitable. Look backward at the growth for the past couple of decades, if the calendar permits you to, and try to extrapolate on the same basis. Of course, there is room for difference of opinion.

Assuming that you agree with the assumption, it is suggested that it is desirable to go with the trend, to control licensing rather than to oppose it, to promote licensing of chemists by chemists.

### Permissive Licensing

A reasonable "middle of the road" position is suggested as permissive licensing. This would call for an act which permitted the chemist, if he desired, to demonstrate his qualifications through suitable state agencies. No one would be barred from practice of the profession. However, the employer who was not otherwise qualified to judge could, if he wished,

take that demonstration of qualifications into account. Thus the licensing of chemists would follow the path of the Certified Public Accountants, not that of the engineers.

Licensing is no cure-all. But the license will be another evidence of qualification of the man. Logically it is difficult to find a reason against permissive licensing. If a person does not himself want to take out a permissive license, he will seldom say that those who wish to do so should not have that privilege. Licensing will do more than any other one thing to complete the making of chemistry into one of the learned professions.

There is a line of thought which suggests that Fellowship in THE AMERICAN INSTITUTE OF CHEMISTS can take the place of licensing. That the requirements are closely parallel is true. But the status of Fellow of an organization not given governmental authority is at best not the same as licensing.

### Promote The Profession

All of you do want to do everything possible to promote that profession from which you earn your living. One way of doing that is to get behind The American Institute of Chemists and in particular to urge some of the newer people in the profession to join—the Members and Associates as well as Fellows. If you are already in the INSTITUTE, please urge others in the profession to join.

If you are not in the INSTITUTE, you have a cordial invitation to submit your qualifications for joining as Fellow, Member or Associate according to the nature of those qualifications.



### Mattiello Receives High Honor

Dr. Joseph Mattiello, F.A.I.C., vice president and technical director of Hilo Varnish Corporation, Brooklyn, N. Y., was made a Chevalier of the Legion of Honor of France by Generals Renault and Tate, on September 30th in Paris. He represented the Federation of Paint and Varnish Production Clubs and the National Association of the Paint, Varnish and Lacquer Industry at the First Technical International Congress, held in France in October.

David E. Lilienthal, chairman, U.S. Atomic Energy Commission, told the Economic Club of Detroit recently, that the practical commercial application of atomic power will not come for eight or ten years, because of still unsolved technical and engineering problems.

### Please Note

Page 459 of the November issue of THE CHEMIST should be changed by adding the name of

### A. E. Sidwell, Jr.

as author directly under the heading, "E. H. Volwiler—Investigator, Editor, Executive."

# Outlook for the Chemist

J. N. Taylor F. A. I. C.

**J**UDGING from reports available, there appears to be at present full and stable employment in the chemical field. There is as usual a small percentage of chemists seeking transfers to positions offering greater advantages and better opportunities. The economic status of the chemist is sound and for those engaged in engineering work unusually so.<sup>1</sup>

It is now over two years since V-J day and the demand for all kinds of manufactured goods is greater than ever. Shortages continue to exist in practically all lines and chemical supplies are still inadequate to meet demands of consuming industries. Based on industrial activity generally and chemical activity specifically, the outlook for the chemist is unusually good.

## Chemistry Basic to Industry

The foregoing conclusion is predicated primarily on trends in chemical production, bearing in mind the profound influence that chemistry exerts upon other sciences and that it is basic to all industry. Activity of chemical-consuming industries is a reflection of chemical activity.

## Principal Applications of Industrial Chemicals

### *Perishable Goods*

Foods & Beverages  
Tobacco Products  
Drugs & Pharmaceuticals  
Toilet Preparations  
Cleansers & Polishes  
Insecticides & Disinfectants  
Paints & Varnishes  
Explosives  
Fertilizers

### *Semidurable Goods*

Clothing  
Shoes  
Furnishings  
Rubber Goods  
Paper

### *Durable Goods*

Furniture  
Refrigerators  
Electrical Appliances  
Household Utensils  
Radio Apparatus  
Television

*Producers Goods*

Machinery  
Containers  
Motor Vehicles  
Ships  
Aircraft

*Other Industries*

Agriculture  
Mining  
Petroleum Refining  
Construction

The chemist is ministrant to all industry and his fortunes are bound up with those of industry generally. His employment in various industries and various capacities does not, however, necessarily follow the general employment pattern since most industries maintain permanent staffs. The organic chemical industry in the United States, for example, expends annually the equivalent of four and one-half per cent of total dollar sales for research. Even during the depression the synthetic organic chemical industry not only maintained, but increased, its research facilities. Technical research must tie in with adequate distribution and efficient marketing; consequently the work of the chemical-economist is becoming increasingly important in research management.<sup>2</sup>

As active participants in our country's unprecedented industrial and economic development and in its pre-

sent rapid growth, chemists can with pride survey their past and present achievement and, with confident assurance, can look forward to opportunities for continued service. His naturally analytical disposition should however, impel the chemist to keep a weather eye upon the trends of the times.

**The Past is Prologue**

Coming events cast their shadows before them and the general industrial outlook can be to a great extent prognosticated by a study of chemical trends. These, translated into indexes and considered in conjunction with other data, would when projected show at a glance the state of industry at a given time. The impact of unpredictable would, of course influence the hypothetical projection.

In the chemical field it is extremely difficult to select from so vast a number of organic and inorganic products, comprising thousands of individual chemicals, those individuals or composites which will point the trend and will be indicative of industry's status at some given period—use patterns intertwine and cross-cut to such a degree.

However, as an outcome of efforts initiated by the Interdepartmental Chemical Statistics Committee, official data are now available showing monthly production of certain key chemicals. Consequently, long-term trends can now be supplemented by

## OUTLOOK FOR THE CHEMIST

short-range views of things to come. These chemical data and trends are published monthly by the Department of Commerce in its "Industry Report on Chemicals and Drugs".<sup>3</sup> A number of significant chemicals forms the groundwork of this presentation and since these chemicals fan out into thousands of other products used by the chemical and other industries, data regarding them are indicative of general industrial activity. In addition to this monthly report, other surveys<sup>4</sup> by chemical-economic specialists of the Department's Chemical Division are extremely helpful in integrating statistical facts with other economic data. References to these and other Government surveys published in 1945 are found in the "Chemical Statistics Directory"<sup>5</sup>, prepared in the Office of Domestic Commerce, Department of Commerce. A list of subsequent surveys prepared by specialists in the Chemical Division since 1945 is on file in the Division.

Comment on the current situation and reference to significant trends follow:

### Trends

The chemical situation has been characterized throughout the year by extraordinary activity. Despite the general upward trend, however, in chemical production, supply continues to be insufficient to meet demand.

Chemical output in this critical

year of 1947 promises to surpass that of previous years. Barring an unforeseen catastrophe, an even higher level of chemical production in 1948 is presaged as a result of our increase in population and because of an increased demand for consumer goods. Exports will continue high.

Sulfuric acid and alkali are particularly indicative of industrial activity and an upward trend in output—with occasional dips—of these highly significant chemicals was evident for several years prior to the recession in their production starting in the spring of 1947. Sulfuric acid output rose in August to 859,262 tons from the 846,366 figure of July. Soda ash (ammonia soda process) registered a decline in August to 363,890 tons from the July output of 377,976 tons. The natural variety reached a record high in August of 27,294 tons. A gain in caustic soda production was recorded in August to 177,310 tons from the July output of 132,366 tons.

Of the organic chemicals, output of chemical benzene in August, aggregating 12,668,647 gallons registered an increase over the July production figure of 12,356,701 gallons. Phenol output declined to 23,588,542 pounds in August from 24,701,138 pounds made in July. Production of synthetic methanol dropped to 44,542,406 pounds in August from the preceding month's output of 45,015,671 pounds.

**Production-Worker Employment<sup>1</sup>  
in Manufacturing Industries  
1939 average=100**

|                               | 1947  |       | 1946  |
|-------------------------------|-------|-------|-------|
|                               | Sept. | Aug.  | Sept. |
| All manufacturing             | 156.7 | 153.8 | 149.5 |
| Durable Goods                 | 179.5 | 177.1 | 173.1 |
| Non-durable Goods             | 138.7 | 135.4 | 130.9 |
| Chemicals and Allied Products | 195.2 | 191.1 | 184.0 |
| Chemicals, n.e.c.             |       | 179.2 | 167.6 |

**Indexes**

**Industrial Production<sup>2</sup>  
1935-39 average=100**

Adjusted for seasonal variation

|                      | 1947   |      | 1946  |
|----------------------|--------|------|-------|
|                      | Sept.* | Aug. | Sept. |
| Manufactures         | 185    | 182  | 180   |
| Total                | 191    | 188  | 186   |
| Durable              | 216    | 210  | 212   |
| Non-durable          | 171    | 169  | 165   |
| Chemicals            | 251    | 241  | 235   |
| Rayon                | 294    | 294  | 256   |
| Industrial chemicals | 429    | 431  | 395   |

\*Preliminary.

**Highlights<sup>3\*</sup>**

Sulfuric acid is in adequate supply for most needs, but deliveries occasionally drop behind in some areas and new consumers often encounter difficulties in locating sources of supply.

Sulfur shipments continue to exceed output, and stocks are the lowest for nearly a decade.

Alkalies remain in a more favorable supply—demand situation than prevailed a few months ago.

Synthetic ammonia production has leveled off in recent months.

Toluene and xylene were readily available but creosote oil and cresylic acid were exceedingly scarce.

Based partly on the high farm cash income this year, an unprecedented demand for fertilizers is anticipated next spring.

The usual seasonal inactivity in the insecticide market now prevails. The trade reports that the past season's sales showed unusual irregularity, owing to weather conditions, but that this situation stretched supplies further than had been anticipated. Present outlook indicates that the only tight spots in next year's supplies will be the arsenates and nicotine insecticides.

Record production of paint is gradually satisfying accumulated demands from consumers. White pigments are in especially short supply.



## OUTLOOK FOR THE CHEMIST

Plastics materials output has been maintained at high levels and substantial increases in shipments and consumption of plastics and synthetic resins occurred during the first half of 1947.

The supply of glycerin increased considerably as soap manufacturers, becoming apprehensive of competition from new detergents, expanded their production.

### Abroad<sup>2,5</sup>

The sulfuric-acid plant of the National Resources Commission at Hulutao, China, is producing fifty tons of acid daily, using lead sulfide from Anhwei Province.

Although sulfur is not mined in Hungary, small quantities are recovered from waste metal sulfides, and additional quantities are imported from Italy.

The Italian dye industry is reported to be operating at about sixty per cent of normal. Reactivation of the industry was made possible largely by UNRRA imports of benzene and toluol.

An Indian Institute of Chemical Engineers has been organized, with headquarters in New Delhi and branches proposed in fourteen cities.

A nitrogen-fertilizer plant is under construction in Mariño, Bulgaria, in the Maritza Coal Basin.

The most serious shortage of raw materials in Brazil's manufacturing industries is that of caustic soda and soda ash as a result of curtailment of exports from the United States and the United Kingdom.

Colombia's proposed economic development program includes the establishment of an alkali plant in that country.

Oxygen & Thermal Industries (SA), Ltd., of Benoni, South Africa, expect to begin production of oxygen, acetylene, and other gases early in 1948.

### International

In international chemical trade new patterns are emerging that will affect the United States' position. Keener competition will no doubt be felt in world markets.

An illuminating and comprehensive survey<sup>6</sup> by C. C. Concannon, F.A.I.C., chief, Chemical and Drug Division, Office of International Trade, Department of Commerce, envisages this significant trend in foreign chemical relations and calls attention to changes that have already taken place. In succinct paragraphs, Mr. Concannon presents the relative positions of foreign chemical producing countries; the trend in foreign trade in chemicals and allied products; analyses of United States exports and imports over more than a decade. Chemical activity in principle world countries is summarized country by country.

1. "Professional Chemical Engineering Pays Off" by Andrew Frazer. Chemical and Engineering News, Oct. 20, 1947. Vol. 25, No. 42.
2. "Research Management in the 1950's" by Raymond Stevens, vice-president. Arthur D. Little, Inc., Cambridge, Mass. Traces the development of technical-economic research in a most interesting manner.
3. Industry Report—Chemicals and Drugs. Monthly. Chemicals and Drugs Section, Office of Domestic Commerce, U. S. Department of Commerce. Available from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Annual subscription \$2.50.
- 3\* Ibid. October, 1947 issue.
4. Prepared under direction of Charles C. Concannon, F.A.I.C., chief of the Division. Includes synopses of information on individual commodities and short form reports on commodities in foreign countries.
5. Industrial Series No. 66. Prepared by L. N. Markwood, F.A.I.C., with the assistance of F. M. Hoffheins, Susan M. Phillips, and Louise Evans, under direction of Mr. Concannon. Available from Superintendent of Documents, Washington 25, D. C. for 15 cents (stamps not accepted).
6. Federal Reserve System.
7. Bureau of Labor Statistics.
8. Foreign Commerce Weekly. Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce, Superintendent of Documents, Washington 25, D. C. Annual subscription \$6.00 (foreign \$8.75). Single copies 10 cents.
9. "Significant Realignment of International Chemical Trade": Foreign Commerce Weekly, Vol. XXIX, No. 4, October 25, 1947.



### 1947 Nobel Prizes in Physics and Chemistry

Sir Edward Appleton, in charge of all British research as secretary of the Department of Scientific and Industrial Research, received the 1947 Nobel Prize in physics for "his contributions in exploring the ionosphere, i. e. electrically conductive strata in the upper atmosphere of the earth." He received the U. S. Medal of Merit for his work on radar in World War II.

Sir Robert Robinson, professor of chemistry, Oxford University, was awarded the 1947 chemistry prize "for his research regarding biologically significant substances from the vegetable kingdom, especially alkaloids."

He is noted for his work on the structure of vegetable substances and for the syntheses of natural products, such as plant pigments and drugs.

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Dr. Alexander Silverman, F.A.I.C., head of the Department of Chemistry of the University of Pittsburgh, delivered an illustrated lecture on "Recent Developments in American Glass Manufacture" before the Pittsburgh Section of the American Ceramic Society at its meeting in the Mellon Institute Auditorium, October 14th. Dr. Silverman gave a similar talk before the July meeting of the International Congress of Pure and Applied Chemistry in London.

# Join The American Institute of Chemists

**Dr. Martin Meyer, F.A.I.C.**  
**Brooklyn College**

(Dr. Meyer is secretary of the New York Chapter of the A.I.C.)

**A**T NEARLY every business meeting of the New York Chapter of the INSTITUTE, there has been discussion of methods of increasing the value of membership to its members. Quite apart from the interest of the Membership Committee, that is a situation which should be appealing to new and prospective members. In the course of one such interchange of ideas the writer, who emphasized the point that while improvement is necessary for progress, there are existing values which are likely to be underestimated by an over-emphasis of future promise, was asked to reduce his thoughts to writing.

The most striking contribution to that particular discussion was made by the Chairman, Mr. L. H. Flett, who remarked that: "The purpose of the INSTITUTE is not so much to get more money for the chemist as to make the chemist worth more money." That seems an excellent starting point for a sales talk on why anyone should join the INSTITUTE.

Why does anyone join and remain a member of a professional organization? Many recent surveys have pro-

vided a large number of answers to that question. Surprisingly enough, the largest number of answers have little or nothing to do with what most professional organizations conceive as their principal purposes. Although it does not usually appear as an answer at all in this form, one infers that probably the numerically most important reason is the desire to be recognized by one's colleagues as a full-fledged adult member of the family, a purely subjective and basically emotional reason. On the other hand, in every questionnaire, the desire "to make contacts" showed largely—an equally subjective desire.

THE AMERICAN INSTITUTE OF CHEMISTS should, therefore, appeal strongly to the great majority of chemists who desire to be honest with themselves, and our most effective membership appeal would be to help them to understand exactly that. Their reasons for joining any society are largely subjective, and the INSTITUTE has always had those reasons as its purpose. The INSTITUTE recognizes the practical problems and realities of the life of the chemist as

an individual, not as a disembodied intellect. The INSTITUTE understands that its members work for a living and desire material progress, and it sees no reason for their being evasive or apologetic about those matters. The INSTITUTE was the first organization primarily with chemists as members which set the advancement of the personal interests of chemists as its goal, as distinguished from the advancement of the science. Those interests are still lively and dynamic within the organization, as evidenced by the discussion which served as the introduction.

The INSTITUTE provides levels of membership which are based upon a judgment of the professional status of the member and reflect this more clearly than most similar organizations. Members may progress from one grade to the next as their professional status grows.

The title, "Fellow of THE AMERICAN INSTITUTE OF CHEMISTS," means that, in the opinion of a large, competently qualified jury of United States chemists, the person to whom it is granted is qualified as a professional and practicing chemist at the highest level which the present state of knowledge of the world makes possible. Our own Fellows, therefore, should display their certificates in a manner which indicates their understanding of that fact, and they should employ their title everywhere, where titles of distinction

such as degrees and honorary positions may be appropriately used, as in written articles, public statements, etc. Such action will increase public recognition not only of themselves, but of the chemist in general. It will attract chemists to our group and it will serve as a stimulus for younger members to achieve the same distinction. This consideration alone, if thoughtfully treated by our present membership, would not only be an adequate return for membership, but a powerful appeal to others. The New York Chapter has formally approved this suggestion.

It is a fact that the membership of the INSTITUTE is composed of a disproportionately large percentage of Fellows. Since the INSTITUTE has a relatively small membership, that does not at all indicate that the title is easy to achieve. It indicates merely that the INSTITUTE must make some effort to attract younger as well as older membership. But this fact should have some immediate appeal for new younger members.

The majority of the members of the INSTITUTE are Fellows, and they possess the qualifications of education, training, experience, and positions in life which merit that title. The INSTITUTE is, further, within itself a very democratic organization. At any meeting of the INSTITUTE, a young or new member has better than an even chance of making precisely the kind of contacts which he desires to make,

every time the "Welcome Committee" provides him with an introduction. And it is the duty of the Committee to see that he is introduced until he is able to integrate himself into the group.

It is noteworthy that the democratic spirit of the INSTITUTE extends to its publications.

The INSTITUTE is, therefore, active, energetic and forward looking. It is the only organization among chemists which has always placed the professional interests of the chemist foremost. Today, when at long last, the professional status of the chemist is beginning to receive public recognition, it is clear that the INSTITUTE has before it a period of great growth and achievement. In that period it will preserve the right of each of its members to express himself equally with all others on the formulation of its policies. Every young chemist should, therefore, give it immediate consideration and join THE AMERICAN INSTITUTE OF CHEMISTS.

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#### **Consulting Group Elects Officers**

The Association of Consulting Chemists and Chemical Engineers, 52 East 41st Street, New York, N. Y. elected, at its October meeting, the following new officers: President, Nicholas M. Molnar, F.A.I.C., Vice president, Abraham Taub, F.A.I.C., secretary, M. F. Lauro, and Treasurer, P. F. Wehmer.

#### **Silver Anniversary**

The 1948 Annual Meeting of The American Institute of Chemists will be held Saturday, May 8, 1948, at the Hotel Pennsylvania, New York, N. Y. The program, which will be announced later, will feature the Silver Anniversary of the Institute, which was founded in New York in 1923.

#### **German Artificial Silk Patents**

Forty-six patents and a number of patent applications relating to the manufacture of artificial silk, formerly owned by I. G. Farben, are available for licensing, at \$15.00 per patent or application, by the Office of Alien Property, Department of Justice, Washington 25, D. C. Information and a list of the patents may be requested from the office of Alien Property. Copies of the Patents may be purchased only from the Commissioner of Patents, Washington 25, D. C., at 25 cents each.

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David H. Jackson, F.A.I.C., vice-president of Croll Reynolds Engineering Company, Inc., 17 John Street, New York, N. Y., spoke, October tenth, before the Southwest Section of The American Institute of Chemical Engineers at Galveston, Texas. His topic was, "The Selection and Use of Ejectors."

### 1947 Nobel Prize in Medicine Awarded

The 1947 Nobel Prize in medicine was awarded jointly to Dr. Carl F. Cori and his wife, Dr. Gerty Cori, biological chemists of Washington University, St. Louis, and to Dr. Bernarda Alberto Houssay, chief of the Institute of Biology and Experimental Medicine at Buenos Aires, Argentina. The Coris received the award for "the discovery of the process in the catalytic metabolism of glycogen". Dr. Houssay was recognized for his "discovery of the significance of the hormone produced by the frontal lobe of the hypophysis."

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Edward Rosendahl, F.A.I.C., executive vice president of Glyco Products, Company, Brooklyn, N. Y., has just returned from a two-months' business trip by air to eight European countries. He reports that American manufacturers could capture most of the European chemical markets formerly held by German cartels, if it were not for difficulties of foreign exchange.

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Goodyear Tire and Rubber Company made its Pliofilm packaging facilities and staff available to the Friendship Train, which collected food across the nation. Packaging specialists from the Department of Agriculture and from Goodyear are preparing the collected food for export from New York.

### European Chemical Industry

C. C. Concannon, F.A.I.C., chief of the Drug and Chemical Division of the Department of Commerce, told the trade forum, held by the International Trade Section of the N.Y. Board of Trade, October 22nd, that the present acute economic crisis in Europe can only be solved by reviving chemical industry there. Mr. Concannon recently returned from a European tour covering eight countries. The food shortage he said, can be relieved by the production of larger quantities of fertilizers. The present production of nitrates, phosphates, and potash there is much too low to meet agricultural needs.

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Dr. Eugene McCauliff, F.A.I.C., sales director of Glyco Products, Inc., of Brooklyn, N. Y., and New Martinsville, West Virginia, announces that Aldo 33, an edible glyceryl monostearate, used in the baking and ice cream industries, has now reached volume production. It has been manufactured in limited quantities during the past two years, awaiting the installation of the present new equipment in the Brooklyn plant.

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Professor E. K. Rideal, director of the Royal Institute of London, spoke on "Mono-Layer Films," at a recent meeting of the research and technical staff of the Calco Chemical Division, American Cyanamid Company, Bound Brook, N. J.

# Government Takes Over Industry's Top Role in Financing Research

**John Bridge**

*Staff Correspondent, The Wall Street Journal*

*(Reprinted from the WALL STREET JOURNAL, New York, N. Y., September 23, 1947. This wholly popular account of Government research nevertheless portrays vividly the immense expansion of Federal Science.)*

**I**NDUSTRY has been displaced by government as biggest financier for America's scientific research.

Before the war the federal government footed about one-fifth the nation's science bill; now it pays well over one-half, officials calculate. Upwards of sixty major agencies have scattered thousands of projects through all the forty-eight states. Uncle Sam owns and operates research facilities valued at about \$1.5 billion, not counting atomic development and production projects, which would double the figure. Thirty thousand scientists are employed directly by the government.

They are probing matters ranging from the theory of ocean wave motion to the development of transparent plumbing; from conversion of coal into gasoline to causes of the "red tide" which loaded Florida beaches with millions of dead fish.

Merely directing this giant science

program is becoming a major problem for Washington. And plans are already afoot to swell federal science spending by about two-thirds within the next decade. Science is bidding for a place in the federal framework ranking with the traditional function of national defense and the more recent objective of social improvement.

## **Impact on Industry**

The impact on industry will be something to watch. For one thing, the government is hiring industry to do much of its research.

The President's Scientific Research Board estimates some \$625 million per year is now spent from the U. S. Treasury for research. But federally-owned laboratories will actually spend only about \$200 million of this while the bulk goes to industrial firms, some of them giants like General Electric and others much smaller, together with universities.

Industry, agriculture and other seg-



ments of the economy will, of course, pay for the vast federal science program through taxes. And the benefits of applied science are expected to flow back to them—even though a heavy proportion of government investigation is directed toward armaments.

### **Bureau of Standards**

The Bureau of Standards, with 2,500 employees and ninety-four buildings on sixty-eight acres in Washington, estimates that about ninety per cent of its work is directly applicable to industry.

Standards is conducting research on ways of protecting personnel from harmful effects of X-rays, used by some sections of industry to seek out hidden faults in their products. Its laboratories are doing other things like keeping alive synthetic rubber research, and trying to eliminate corrosion of underground pipes.

Another Commerce Department agency, the Civil Aeronautics Administration, is working at its Indianapolis laboratories on air safety devices like crash-resistant fuel tanks. A third Commerce Department agency, the Coast & Geodetic Survey, is conducting research to adapt war-developed electronic position location equipment to offshore surveys. The goal is quicker, cheaper, more accurate surveying for charts.

### **More Money, More People**

A civilian government agency, the National Advisory Committee for

Aeronautics, is doing much of the basic research on projects like guided missiles and supersonic speed airplanes. In wind-tunnels at Moffett Field, Calif., experts are trying to solve such problems as the best shape for a 1,000 mile-an-hour airplane. In another experiment at its Cleveland laboratories, the N. A. C. A. is still trying to answer one of Aristotle's \$64 questions—just what combustion is—and to find out what really goes on when an aircraft fuel burns. This agency has more money, more people, and more equipment than at the peak of the war.

The Department of Agriculture has long done a large fraction of government civilian research. Its science arm, the Agricultural Research Administration, conducts probes on a list of farm products running from alcohol through watermelons. One big A.R.A. project now under way looks toward more farm mechanization. It's working on a sweet potato harvester which will dig up the plant, chop off the top foliage and grade the potato for size, all the while the harvester moves through the field.

Other A.R.A. groups are developing fibres from chicken feathers, peanut oil and skim milk, while yet another is trying to find a way to stop the White Fringed Beetle. This voracious critter, "the beetle with the fringe on top," devours anything that's a plant.



## GOVERNMENT TAKES OVER INDUSTRY'S . . .

Over in another big government department, Interior, other bureaus are doing things of interest to industry. The Bureau of Mines is conducting research on uses of bituminous and anthracite coal, on synthetic gasoline development, and in mineral mining and metallurgy. For example, it is developing a process for filtering out the different metals in an alloy, useful in recovering valuable metals from the scrap pile. In another project, the Bureau of Mines is cooperating with the Navy Department and the Bureau of Standards to make a fuel for jet propulsion from briquette coal.

### **Volcanoes and Optics**

The Geological Survey does mineral research work, too. But its share of this work is concerned mostly with discovery of the mineral deposits. This agency is also conducting research on such diverse subjects as volcanoes, optics (for design of surveying equipment), and photographic mapping techniques. The Fish and Wildlife Service is exploring the habits and supply of finny and furry critters.

The War and Navy Departments, with the bulk of federal research funds, devote most of their time and money to instruments of war, details of which are restricted. But a significant proportion of their research is of commercial importance. Aside from general advancement of scientific "know-how" through their ad-

vanced science requirements, they are doing research on such things as climatic effects on food, clothing and material, transportation techniques, weather, and engineering and construction problems. Both War and Navy are also doing medical work.

Several other federal agencies are doing research in medical problems, too. The Veterans Administration is testing new advances in plastic and metal artificial limbs.

Others, like the U. S. Public Health Service and the National Institute of Health, in their own laboratories and through grants-in-aid to other laboratories, are trying to find out things like effectiveness of streptomycin, one of the "wonder drugs," in treating tuberculosis. These agencies are also conducting research on heart disease, the common cold, and tropical diseases.

### **Atoms and Anatomy**

Atomic energy research has yielded a valuable medical and biological research tool in radioactive isotopes. These, a by-product of atomic fission, are used in studying a wide variety of diseases like cancer, leukemia, thyroid disorders and bone diseases. By feeding these isotopes to plants used for animal fodder, scientists can closely trace the processes by which food is utilized in living organisms. This process, which can be applied to plants as well, may some day yield knowledge which will make possible

a tremendous increase in the world's food supply.

Invasion by government of the scientific realm once dominated by industry was spurred by the war, when federal appropriations were paying perhaps five-sixths of the national total. A resurgence of industrial activity since has pushed the aggregate of scientific expenditures in the U. S. higher than they have ever been before—to an estimated annual rate of \$1.2 billion. Industry in fiscal year 1947 spent an estimated \$450 million for science, compared with a 1941-1945 average of \$80 million a year. Universities and other research organizations have also increased their expenditures to around \$85 million annually from a wartime average of about \$20 million.

Federal science expenditures are still growing, too. Although they are currently below the wartime peak, they are at least twenty-five per cent over the wartime average of \$500 million annually.

This booming federal science program is slated to grow even bigger in the next decade. The President's Scientific Research Board, which is now making a survey of federal science, has recommended that the nation's total science budget be upped to \$2 billion annually by 1957. Federal research agencies would spend \$1 billion of this.

### Figures Don't Jibe

It's hard to put your finger on a

single figure which will sum up conclusively all federal science expenditures for the 1947 fiscal year. The U. S. has no unified policy on scientific research or support of science. Funds for research are made available to the various major departments or agencies, which then allot funds to the research staff of some other federal agency.

The President's Scientific Research Board recently estimated the federal research and development bill for 1947 at \$625 million. But the board eliminated atomic energy research from its calculations.

Another authoritative government agency estimates federal science expenditures, including atomic research and "other factors" at \$700 million, with this figure slated to hit \$870 million in the fiscal year 1948.

During the war, government science came partially and briefly under a unified agency when the Office of Scientific Research and Development was organized. With the demise of this wartime agency, there are now three points in the government where parts of the federal research policies are made.

### Three Key Agencies

The Bureau of the Budget has usually allocated research functions among executive agencies. A second coordinating agency has been the Joint Research and Development Board of the National Military

## GOVERNMENT TAKES OVER INDUSTRY'S . . .

Establishment under unification of the armed forces. Headed by the wartime chief of OSRD, Dr. Vannevar Bush, it rides herd on all research and development of the armed services.

A third agency is the National Academy of Sciences. It consists of several hundred scientists, elected by the membership as vacancies occur. It functions as an advisory body, and acts only on requests for assistance from departments of the government. The National Academy of Sciences receives no direct federal appropriation, but meets its expenses for governmental investigations by allotments from the departments asking assistance.

A new fourth agency—the National Science Foundation—was authorized by the last Congress, but President Truman vetoed the bill. Congress wanted scientists to appoint the director; Mr. Truman thinks the chief executive should name him and scientists should act only as advisors. Another attempt to create such a foundation will be made next session.

The foundation would attempt to promote "basic" rather than "developmental" research. The distinction between these is clear in scientists' minds—for instance, the "basic" theories of atomic energy were well advanced before the war but it took "developmental" work to produce the atom bomb. About a tenth of scien-

tific expenditures in the U. S. now are 'basic.'

One government scientist puts it this way: "There are three kinds of basic research. About thirty per cent is glamorous, the kind where the scientist gets the Nobel Prize, or is acclaimed by his fellows at some convention. We have no trouble selling this kind of basic research to the universities. Another thirty per cent has something in it dollarwise—it's easy to sell this to industry. But the biggest part—forty per cent is scientific drudgery, filling in the enormous gaps in knowledge with no guarantee of finding anything of immediate note. We can't sell this to either industry or the colleges and have to do it ourselves."

One tiny piece of this scientific drudgery now being done in federal laboratories is calculated to take an infinite number of years to complete. This project seeks to fill in the unknown spaces in the electromagnetic spectrum. The number of possibilities are equal to mathematical infinity. Another piece of scientific drudgery consists of exploration in the realm of pure mathematics and compilation of the results.

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Schenley Distillers Corporation plans an increase in 1948 in manufacturing and research activities, as well as increased production of penicillin and streptomycin.

# Necrology

## Howard S. Neiman

Howard Seger Neiman, for twenty years Secretary and since 1946 Honorary Secretary of THE AMERICAN INSTITUTE OF CHEMISTS, passed away in Brooklyn, New York, on October 31, 1947, aged seventy-nine years.

Mr. Neiman's life was one of many interests, in each of which his outstanding personality impressed all who came into contact with him.

A native of Norristown, Pennsylvania, he graduated from Lehigh University in 1888 with the degree of Bachelor of Science, having specialized in chemistry. His first business associations were in the dyestuff and colors industry, he having been Superintendent of the Albany Coal Tar, Dye and Chemical Company, then technical expert for several other companies in the color and dyestuff fields. As a young man his work in dyestuff development and application required him to make frequent trips to Europe so that he became for a time practically an "Atlantic commuter".

Having competed the first phase of his life's work, that of a chemist and dyestuff technologist, Mr. Neiman studied law at the New York Law School and was admitted to the Patent Bar.

Since 1906 his major profession had been the practice of patent and

trade mark law, and in this work he had represented an array of clients which included many of the most important chemical and cosmetic companies in the country, as well as numerous individuals.

We state his "major profession" advisedly because Howard Neiman was noted for his many interests and for the zeal with which he applied his outstanding talents in many fields of endeavor.

As a writer, editor, and publisher he excelled. He was the author of numerous papers and subjects in the field of organic chemistry; was associate editor of *The American Perfumer*, and for twenty-six years, from 1918 to 1944, he was editor and publisher of *The Textile Colorist*.

In association with his fellow men, Howard Neiman was exceptionally distinguished. He was a natural leader, endowed with that poise and charm which made his leadership most enjoyable to all who worked with him. As an inevitable result, his name appeared near the top of many rosters, among them—to name only a few—The American Chemical Society, The Chemists' Club, Old Colony Club, Pleiades Club, Manhasset Yacht Club, Theta Delta Chi, Municipal Opera Association, of which latter he was president for some years.

Mr Neiman was a charter Member

## NECROLOGY

of THE AMERICAN INSTITUTE OF CHEMISTS and was Secretary of the INSTITUTE from 1926 to 1946, when he was elected Honorary Secretary. He was devoted to the theorem that a Professional Man deserves Recognition and Recompense and was a firm believer in THE INSTITUTE OF CHEMISTS as an association of chemists of recognized qualifications devoted to maintaining the highest standards of professional ethics and to improving the status of chemists in the community.

It is well known that the early days of the INSTITUTE were difficult ones—that its path was strewn with obstacles for many years—that it has now earned a useful and honorable place among our American professional societies. There are many among us who will always view THE AMERICAN INSTITUTE OF CHEMISTS as an

enduring monument to the industry, the faith, the courage, the perseverance, and the personality of one man—Howard S. Neiman.

One facet of Mr. Neiman's brilliant personality which was little known to many of his friends was his exceptional talent as a poet. He had published privately several volumes of poetry, generally under the *nom de plume* of "John Campbell Delano". His verse expressed his character, the personification of Industry—Skill—Justice—Geniality—Fidelity.

All those who have been so fortunate as to have their lives influenced, even a little, by contact with the life of this great spirit, will remember, him as one of God's Noblemen, and can think of his life in those two words of complete summation, "Well Done".

—A.P.L.

## Resolutions

WHEREAS: God in His infinite wisdom has called to eternity,

### Howard S. Neiman

WHEREAS: The National Council of The American Institute of Chemists through its association with Howard S. Neiman as a man—member, secretary, honorary secretary—over a span of almost a quarter century, recalling his personal worth, his genial disposition, his outstanding proclivity to tell of past experiences,

his acumen in reciting humorous tales, his less-known but remarkable ability in writing several books of poems, and his variety of interests, in music, drama, literature, painting, and travel, feels deeply its great loss;

FURTHERMORE, The American Institute of Chemists was aware of his early professional activities, as in the early days of the dyestuff industry; his pioneering in the cosmetic chemical industry, and later his work as an outstanding patent attorney,

whose advice was often sought by government patent examiners.

MOREOVER, In his many trips to Washington, where his last affliction struck, undoubtedly he often thought as he once wrote:

"I stood today before the House  
of Laws  
The Nation's heart, whose every  
beat and throb  
Is felt from shore to shore,  
where, nearly, men  
Become the Gods of Hosts,  
whose actions rob  
The earth of wickedness and  
give to man  
His rights and all that manhood  
can adorn.  
'Tis here within this edifice sub-  
lime  
That Justice, law and equity are  
born."

Howard, adieu! No longer will your happy presence pervade our gatherings. We are thankful to have known you, and we are richer for that radiance with which you met us. Your influence in art, and in science, and your words of friendship will live forever.

THEREFORE BE IT RESOLVED: That a copy of this Resolution be spread upon the minutes of the National Council, and that copies thereof be placed in the hands of Mrs. Edna A. Neiman and of Howard S. Neiman, Jr., so they may know the esteem in which Howard S. Neiman

was held by his associates in The American Institute of Chemists, and to serve as a token of sympathy in this, their hour of bereavement.



### To The American Institute of Chemists:

May we express our sorrow and sympathy to you in the loss of Mr. Howard S. Neiman, your Secretary for so many years, and a distinguished member of the profession. Your loss is also that of the many scores who had the honor of knowing him.

Nicholas M. Molnar, President  
Association of Consulting Chem-  
ists and Chemical Engineers,  
Inc.

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I was indeed sorry to learn that Mr. Neiman has left us. His passing leaves a void that will never be filled. I remember the many kindnesses that he manifested to me. He was a friend to all of us.

—J. N. Taylor, F.A.I.C.,

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I had the privilege of working with Mr. Neiman for many years on the Council of the INSTITUTE. Being also a charter member of that organization, I recall with considerable pleasure the many occasions when his wisdom and energy pulled the organization together. He served the Institute not only as an efficient secre-

tary but as a wise counselor. All of us who knew him and had the privilege of working with him know how sincere he was in his activities and aspirations for the INSTITUTE. His philosophy of life was an inspiration to the men who worked with him. I shall always regard it as an honor to have known him and to have been associated with him so closely in the

work of the INSTITUTE. The things for which Mr. Neiman stood and the impress he made on life are beyond the power of death to destroy. He leaves an impress in the lives of those who knew him which is indelible. His passing is a loss felt by all who knew him.

—Dr. M. L. Crossley,  
Past President, A.I.C.

### Scientists and Management

Mr. George W. Merck, president of Merck and Company, spoke on "Scientists and Management in the Chemical Industry", when he accepted the 1947 Chemical Industry Medal of the American Section of the Society of Chemical Industry, at its New York meeting, November seventh.

"Management", he stated, "must prepare the soil in which research can flourish. Management must provide encouragement, a feeling of security, and inspiration to scientists. A unique appeal of the chemical industry lies in the urgent demands of competition—the intensity of effort that keeps the individual working at top constructive pace, but... the essence of scientific endeavor remains achievement.

"We must never fail to view the scientific worker as an individual as well as part of the group. We must help him to advance in knowledge, develop opportunities for his achievement, and assure him adequate recognition in so far as this is possible with-

in the limits set by competitive and cooperative effort.

"Thus management has a three-fold responsibility to the members of its scientific staffs: (1) There should be sufficient funds for research. This can only be done if the enterprise is profitable. The fundamental job of management is to have a profitable business so that all research which the company needs can continue; so that there can be adequate expansion of pilot plants and production facilities; and so that there is support for sales and advertising. (2) Management should provide the best facilities and equipment. (3) Academic contacts should be maintained through fellowships, grants, training programs, and the exchange of professors and students. In these ways management can build a bridge between the fields of pure and applied science.

"The chemical industry along with the other industries, if it is to have the most favorable future, needs to



spend part of its time and effort outside its laboratories, factories, and offices, to understand some of the powerful forces of public opinion."

### **Bjorksten Leases More Space**

The Bjorksten Research Laboratories, 185 North Wabash Avenue, Chicago 1, Illinois, have leased laboratory space at 732 South Federal Street, Chicago, from the Edwal Laboratories, Inc. Edwal have transferred that portion of their research activities related to production problems to the Ringwood, Illinois, plant.

### **American Potash Reports Progress**

American Potash and Chemical Corporation reports, in connection with its postwar expansion program, that it has completed three undertakings: A new \$300,000 research laboratory; an office building, and a subdivision of forty-seven homes, all at Searles Lake in the Mojave Desert of California. Scheduled for completion in 1948 are a \$4,500,000 soda ash-borax plant and a \$2,000,000 power plant expansion.

Dr. James W. McBain, professor of physical chemistry at Stanford University, California, spoke at a meeting of the research and technical staff of Calco Chemical Division, American Cyanamid Company, Bound Brook, N. J. He stated that there is a tendency in college research

laboratories to become too far removed from the field of practical application. Industrial application is ten years ahead of scientific theory and offers a continuous challenge to academic men whose duty it is to find the rational explanation for it and thus further research.

The Special Libraries Association's program grants a foreign student the opportunity to study special libraries and library methods in the United States. Miss Anne Lovaas of Kristiansand, Norway, is the current student. She recently completed courses at Columbia University's Library School, and two weeks of study as guest of the Calco Chemical Division of American Cyanamid Company, which maintains a fine industrial library. She will visit other industrial plants and special libraries relating to the publishing, financial, insurance, and advertising fields.

W. Gibson Carey, Jr., president of the Yale and Towne Manufacturing Company, Chrysler Building, New York, N. Y., announces that the company has expanded its industrial products to make enclosed electric heating units. The Buffalo plant is now manufacturing the rod-type electric heating unit, and the company is tooling up to make the strip and cartridge types. David Y. Robinson has been appointed sales manager of electric heating units.





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### November Meeting

The 241st meeting of the National Council was held November 18, 1947, at The Chemists' Club, 50 East 41st Street, New York, N.Y., with President Foster D. Snell presiding. The following officers and councilors were present: H. L. Fisher, L. H. Flett,

F. A. Hessel, R. E. Kirk, J. Mattiello, J. M. McIlvain, J. J. Miskel, E. H. Northey, D. Price, G. L. Royer, F. D. Snell, L. Van Doren. V. F. Kimball was present.

The minutes of the previous meeting were accepted.

The Treasurer's report was accepted.

The Secretary reported on the membership status, and recorded the deaths of the following members:

Lester Kirschbraun, F.A.I.C.,  
on September 6, 1947

Herbert Raymond Moody, Life  
Member, on October 20, 1947

Howard S. Neiman, Honorary  
Secretary, on October 31,  
1947.

Clark S. Robinson, F.A.I.C., on  
May 23, 1947.

Resolutions, prepared by Dr. Frederick W. Zons, on the death of Honorary Secretary Howard S. Neiman, were adopted, (See page 519, this issue of *THE CHEMIST*.)

A letter from Hermann C. Lythgoe, recently elected Life Member, was read.

A copy of a letter written by the Association of Municipal Chemists of the City of New York to the Honorable W. J. O'Dwyer, Mayor, was read. It was requested that a release be prepared concerning the status of the New York Municipal chemists.

A letter from Homer L. Forbis was presented in which he gave additional information to aid the Council in evaluating the applications of two members for Fellow membership.

Upon motion, the Council reaffirmed its policy to the effect that if any member of the *INSTITUTE* is dissatisfied with the grade of membership to which he is elected, he or any other member of the *INSTITUTE* may request that he be considered for a

different grade of membership.

A letter from a professor relative to eight students who will receive degrees in June and who wish to join the AIC was read. The letter was referred to the Committee on Qualifications.

The Secretary called attention to the fact that the 1948 Annual Meeting of *THE AMERICAN INSTITUTE OF CHEMISTS* will be its Silver Anniversary. Suggestions were made concerning ways of commemorating this event. It was decided to hold the Silver Anniversary Meeting in New York, the city of the *INSTITUTE*'s birth.

Dr. Mattiello, chairman of the Committee on Arrangements for the 1948 Annual Meeting, thanked the Council for its suggestions, which he will use in planning the program for that event.

Dr. Harry L. Fisher, chairman of the Committee to suggest revisions to qualifications for AIC membership, to be included with amendments to the Constitution for consideration at the 1948 Annual Meeting, discussed several proposed revisions for the information of the Committee.

Dr. E. H. Northey was appointed to membership on this committee to take the place of the late Howard S. Neiman.

Dr. Snell announced the formation of a committee, consisting of Dr. F. A. Hessel, Dr. J. J. Mattiello, Mr. H. E. Riley, and Dr. L. T. Work,

## COUNCIL

to meet with Mr. A. Cressy Morrison, chairman of the Financial Advisory Committee, regarding the establishment of a capital fund.

The following new members were elected:

### Fellows

#### Allard, Romeo P.

*Dean, College of Science, Loyola University of Los Angeles, Los Angeles 45, California*

#### Balassa, Ladislaus

*Research Director, the U. S. Finishing Company, 40 Fountain St., Providence 3, Rhode Island.*

#### Beals, Carlos L.

*Director of Research, Otis Clapp & Son, Inc., 344 Newbury Street, Boston, Mass.*

#### Bentley, Gilbert T.

*Director of Research, Collett-Week-Nibecker, Inc., P. O. Box 631, South San Francisco, California.*

#### Borton, Richard A.

*Chief Chemist, L. E. Carpenter and Company, 170 North Main Street, Wharton, New Jersey.*

#### Carlisle, Robert L.

*President, R. L. Carlisle Chemical and Manufacturing Company, Inc., 207 Norman Avenue, Brooklyn 22, New York*

#### Farkas, Adalbert

*Research Chemist, The Barrett Division, Allied Chemical and Dye Corporation, Philadelphia, Penn.*

#### Foley, Francis Bernard

*Director of Research, The Midvale Company, Philadelphia 40, Pennsylvania*

#### Friedrich, Martin E.

*Research Chemist, E. I. du Pont de Nemours Company, Chambers Works, Wilmington, Delaware.*

#### Friderici, Edwin D.

*Chief Chemist, Mohawk Carpet Mills, Inc., Amsterdam, New York*

#### Greenlee, Sylvan O.

*Chief Development Chemist, S. C. Johnson & Son, Inc., Racine, Wisconsin.*

#### Hansen, Waldemar C.

*Manager, Research Laboratories, Universal Atlas Cement Company, Gary, Indiana.*

#### Kamlet, Jonas

*Director, The Kamlet Laboratory, 250 East 43rd Street, New York 17, N. Y.*

#### Konig, Otto

*Research Chemist, Baroid Sales Division, National Lead Company, 830 Ducommun Street, Los Angeles 12, California*

#### Konwiser, A. Lincoln

*Director of Laboratory, C. F. Kirk Company, 521-23 West 23rd St., New York, N. Y.*

#### Lazier, Wilbur A.

*Director, Southern Research Institute, Birmingham 5, Alabama.*

#### Lyons, Sanford C.

*Technical Director, Georgia Kaolin Company, Dry Branch, Georgia.*

**Mann, Leo**

*President, Leo Mann and Company, 15 Kingston Street, Boston 11, Mass.*

**Peet, Roy W.**

*Vice President, Colgate-Palmolive-Peet Company, Jersey City, N. J.*

**Pray, Blaine Otis**

*Research Group Leader, Pittsburgh Plate Glass Company, Barberton, Ohio.*

**Rosenblum, Harold**

*Chief Chemist, Premo Pharmaceutical Laboratory, Inc., 433 Broadway, New York, N. Y.*

**Shannon, James A.**

*Director, Squibb Institute for Medical Research, E. R. Squibb and Sons, New Brunswick, New Jersey*

**Siddall, Donn Frank**

*Director of Research, The United States Stoneware Company, Box 350, Akron, Ohio*

**Skolnik, Sol**

*Assistant Section Head, Inorganic Chemistry Section, Naval Ordnance Test Station, Inyokern, California.*

**Members****Jubanowsky, Louis J.**

*Senior Chemist, The Baker Castor Oil Company, 35 Avenue A, Bayonne, N. J.*

**Mulqueen, Michael P.**

*Director of Research, Pellissier Jonas and Rivet, Inc., Water St., Walden, New York.*

**Osterheld, Robert K.**

*Graduate Study and Teaching Assistantship, University of Illinois, Urbana, Illinois.*

**Overbye, D. Alvion**

*Manager, Quality Control Division, E. R. Squibb and Sons, 25 Columbia Heights, Brooklyn 2, New York*

**Roosa, Max B.**

*General Service Manager, Parker Rust Proof Company, 2177 East Milwaukee Avenue, Detroit 11, Michigan.*

**Shingler, Angus Julius**

*Chemist, Federal Security Agency, Food and Drug Administration, 416 Federal Annex, Atlanta, Ga.*

**Siebel, Robert V.**

*Associate Director, E. A. Siebel & Company, 8 South Dearborn St., Chicago 3, Illinois.*

**Smith, Richard E.**

*Chief Chemist, H. B. Fuller Company, 255 Eagle Street, St. Paul 2, Minnesota.*

**Thomas, Beaumont**

*Chief Chemist, Stebbins Engineering and Manufacturing Company, 363 Eastern Boulevard, Watertown, New York*

**Weber, Peter J.**

*Chief Chemist, Associate and Managing Director, E. A. Siebel and Company, 8 South Dearborn St., Chicago, Illinois.*

## COUNCIL

### National Council Meetings

Council meetings of The American Institute of Chemists will be held at The Chemists' Club, 52 East 41st Street, New York, N. Y., on the following dates:

December 16th  
January 20th  
February 17th  
March 16th  
April 13th

### Reinstated to Associate Membership

#### Ulrich, Stephen E.

*Graduate Student, Rutgers University, New Brunswick, N. J.*

### Raised from Members to Fellows

#### Applezweig, Norman

*Research Consultant, American Home Products Corporation, 350 Fifth Avenue, New York 1, N. Y.*

#### Smith, Gale C.

*Technical Director, Berry Brothers, Inc., Detroit 7, Michigan.*

There being no further business, adjournment was taken.

### Weckesser, Charles L.

*Product and Machine Development (Self-employed), 902 E. 81st St., Los Angeles 1, California.*

### Weinerman, Alex

*Chief Chemist, Debrville Chemical Corporation, 1841 Broadway, New York, N. Y.*

### Associate

### Brown, David G.

*Chemist, Foster D. Snell, Inc., 29 West 15th Street, New York 11, New York*

### Reinstated to Fellow Membership

### Parks, Harold C.

*Chief Chemist, Valentine and Company, Brooklyn, New York.*

## Chapters

### Chicago

*Chairman, Edward L. Gordy*

*Vice chairman, J. Bowman*

*Secretary-Treasurer,*

*Mary L. Alexander*

*Universal Oil Products Company*

*310 South Michigan Street*

*Chicago 4, Illinois*

*Council Representative,*

*Martin de Simo*

*Reporter to The Chemist,*

*Madge M. Spiegler*

### Meeting Dates 1947-1948

**December 12, 1947**

**February 13, 1948**

**April 2, 1948**

**May 14, 1948**

The program for the December meeting features a panel discussion on "What Does Management Expect of The Chemist? What Does the Chemist Expect of His Job?" Speakers who will lead the discussion are: Dr. R. K. Summerbell, Northwestern University; A. B. Cramer, F.A.I.C., F. & F. Laboratories, and R. F. Baldaste, F.A.I.C., Standard Oil Company (Indiana). All members are invited to participate in the discussion.

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### Los Angeles

*Chairman*, Dr. Albert Salathe

*Secretary*, Manuel Tubis  
11322 Delano Street  
North Hollywood,  
California

*Treasurer*, Edwin B. Henderson

*Council Representative*,  
Dr. Herman Maisner

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On October 24th, our chairman, Dr. Albert Salathe, introduced the speaker, Dr. Gustav Egloff, to one of the most enthusiastic audiences ever gathered at a Los Angeles meeting of the INSTITUTE. The audience consisted of interested members of the faculties of local colleges and universities, outstanding industrial chemists and others interested in fostering a professional program for chemists. We of this chapter feel that many new members of sincere interest in our program will be gained, and we

look forward to a year of great activity.

Some of the highlights of Dr. Egloff's talk were:

(1) The beginning of a professional program should start at the college level.

(2) Chemists should organize on county, state, and nation-wide basis as do the medical doctors.

(3) Teachers of chemistry should be the best obtainable by commensurate remuneration.

(4) Curricula should be stiffened and lengthened to raise the level.

(5) A code of ethics even more lofty than the Hippocratic Oath should be adopted and adhered to.

(6) Chemists should enter public life, develop civic-mindedness and establish public relations whenever and wherever possible.

(7) Chemists must develop vigilance against laws which may hamper them.

(8) All organizations of chemists have an obligation to aid in the establishment of a professional program for chemists.

For those of us who have constantly read Dr. Egloff's well-worded messages, this meeting was a delightful restatement; to our guests and prospective members, a succinct crystallization of their own ideas as evidenced by the animated discussion.

Many of those present felt that registration and licensing would go far in the direction of establishing

and maintaining a true professional program for chemists.

We are sure that the initiation of our program for this year has aroused great interest in these matters in the local chemical community.

### Future Meetings

For our future meetings we plan:

(1) A symposium by members of the faculties of three local colleges and universities on initiation of professional program at the student level.

(2) A panel discussion on licensing by representatives of other licensed professional groups.

Speakers and meeting dates will be announced.

### New Jersey

*Chairman,*

Dr. Paul Allen, Jr.

*Vice Chairman,*

Dr. R. W. Charlton

*Secretary,*

Harry Burrell

Burrell & Neidig

115 Broadway, New York 6, N.Y.

*Treasurer,*

John B. Rust

*Council Representative,*

Dr. G. L. Royer

A meeting of the New Jersey Chapter is being held on December 15th at 8 p.m. in the Public Service Auditorium, Newark, N. J. Dr. Harry L. Fisher, F.A.I.C., director of organic

research, U. S. Industrial Chemicals, Inc., Stamford, Conn., will speak on "Synthetic Rubbers, Present and Future."

## Comment

### A Heart-Warming Situation

To the American Institute of Chemists:

Your letter regarding returned copy of *THE CHEMIST* from my Virginia address, came to me here in the woods (Sebago Lake, Maine) like a refreshing memory of the past.

There is the greatest difference in the procedures adopted by different organizations in regard to their Emeritus members. The INSTITUTE has made me feel happy rather continuously since I retired. Your concern as to my proper address is but another instance of the kindness of the INSTITUTE organization.

When I retired, I was made to feel fully that mine was an honorable sort of position and, much as it used to be with the family grandfather of old days, I was given to understand that a cozy seat by the fire-side was always to be mine. It is a very heart-warming situation.

—Dr. Herbert R. Moody, F.A.I.C.

*Professor Emeritus of the City College of New York.*

**Note:** The above letter was one of the last written by Dr. Moody before his death. (See November *CHEMIST*.)

**Comment on the Coalition  
To The American Institute of  
Chemists:**

It may be worth noting that visitors here from the Middle West, belonging to A.I.C., have told me that they were prepared to resign in the Spring, but when the merger with the A.C.S. fell through or rather did not materialize, they decided to remain with us—because of the “guts” displayed by our officers in the matter of insisting on our high standards.

—Dr. Albert Salathe,  
*Chairman, Los Angeles Chapter.*

Dr. Gustav Egloff, F. A. I. C., spoke on “The Modern Oil Industry,” before a joint meeting of the Western Society of Engineers and the American Society of Testing Materials, on November 18th, in Chicago. He will speak, on December 16th, before the Rotary Club of Chicago on “Modern Products from Petroleum.”

Dr. Johan Bjorksten, F. A. I. C., president of the Bjorksten Research Laboratories, Chicago, Illinois, has been elected a director of the Association of Consulting Chemists and Chemical Engineers, Inc.

The Standard Oil Company (New Jersey) has contributed \$250,000 to the New York University-Bellevue Hospital Medical Center Fund.

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## For Your Library

UNIT PROCESSES IN ORGANIC SYNTHESIS. By P. H. Groggins. Chemical Engineering Series. McGraw-Hill Book Company, 1947. 931 pp. 6" x 9 1/4" \$7.50.

The third edition of this book is well written and might aptly be called Applied Heavy Organic Chemistry. The various practical processes are of wide range and well covered, with a tendency to rely on recently published literature. The sulfa drugs and antibiotics are not discussed, but the preparation of DDT, 2-4 D, and sulfamic acids is well handled. Dye-stuffs and intermediates and high polymers, including the silicones, are clearly and simply treated.

—Dr. J. A. Steffens, F.A.I.C.

THE LIFE OF A CHEMIST. Memoirs of Vladimir N. Ipatieff. Translated by V. Haensel and M. Dolinin. The Hoover Library on War, Revolution, and Peace, Publication No. 21. Stanford University Press. 658 pp. 6" x 9". \$6.00.

These memoirs are rich literary fare. They contain far more than the autobiographical details of an exciting, productive, and unusual life, Dr. Ipatieff was first trained as a Russian army officer. He was fascinated by chemistry and turned to it despite discouraging obstacles. He became professor and member of the Russian

Academy of Sciences. He organized Russian chemical industry during World War I. He helped restore chemical industry in the U.S.S.R. after the Revolution, and he held important scientific administrative positions under the Soviets until 1930. Throughout these years his contributions to the science of chemistry were so sufficiently important that it is said, he "stands with Mendeleev and Lomonosov as one of Russia's outstanding chemists and he has had a far greater influence on world chemistry than his two famous countrymen."

In other respects, his life contains those elements of which every chemist will recognize some part in his own experience: He coped with lack of facilities for his chemical work; he met professional jealousy; he encountered those who would profit by taking credit for his work; he solved difficult problems; he rejoiced at the successful completion of original research, but gradually he rose in achievement until he could look back in these memoirs upon a life rich in recognized accomplishments.

Within this book is still another story: The conflict between the scientist who tries to ignore politics and that political world which intrudes and finally even destroys his pursuit of science. Such a conflict is emphasized by its location in a country so

unstable and so riddled with political intrigue that for one-hundred and eighty-seven years (1730 to 1918) only one ruler is reported to have died a natural death. It was inevitable that the mesh of politics would finally close around the scientist. It came in 1929, when the purges eliminated the guilty and the innocent alike, despite their scientific attainments, if they were so unlucky as to be educated or born to the intelligentsia. Of the top scientists, "... the gradual arrest and elimination of the following men had been agreed upon: Spitalsky, Kamzolkin, Kravets, Fokin and Ipatieff. . . Early in 1929, Spitalsky had been arrested; six months later, Kamzolkin, the director of industrial chemistry in the Gosplan, and now in November, Kravets. The future looked none too pleasant, since between me and my arrest there remained only Fokin. . ." Ipatieff, "you are like Caesar's wife, above suspicion."

This book may be read for the little-known history of chemistry in Russia before and after the Revolution. There are some surprising facts about discoveries made there. The story of industrial chemical development is illuminating.

The picture of everyday life in Russia will fascinate those who want to know more about this country, and the effect of political turbulence upon the characters of different individuals will delight the psychologist. For

those who like a touch of royalty, Dr. Ipatieff's account of his acquaintance with the ruling family adds further clarity to that tragic episode. Strangely enough, the ruling house of Romanoff began, in 1613, in the Ipatieff monastery across the Volga from Kostroma. It ended three-hundred and five years later in the Ipatieff house in Ekaterinburg.

The editors have provided an addenda containing brief sketches describing Russian and other scientists and political figures, institutions, and subjects, so that anyone can read this book with understanding.

These memoirs are warmly recommended to chemists or non-chemists as unusual, fascinating, and informative.

—V. Castles

### Research

A new British journal, entitled *Research*, began publication with the October 1947 issue. It is particularly concerned with applied research. The contents of the first issue included: "Wartime Development of Diamond Dies", by Sir Clifford Paterson; "Metallic Creep," by A. H. Sully; "Chemical Regulators of Plant Growth", by M. A. H. Tincker; "British Scientific Instrument Research Association", by A. J. Philpot, and an editorial by Sir John Anderson. The research supplement to this issue featured "Measurement of Viscosity of Glycerol at High Temperatures," by Vladimir Vand, and

#### FOR YOUR LIBRARY

"Studies in Detergency, Part 1, The Oil Constituent in Naturally Occurring Domestic Dirt," by C. B. Brown. The publication is issued monthly at a subscription price of \$10.00 per year. American agents are Interscience Publishers, Inc., 215 Fourth Avenue, New York 3, N. Y.

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"The Key to Rapid Translation of German", by C. V. Pollard, associate professor of Germanic languages, The University of Texas. Textbook covering a method for translating German rapidly and accurately, which has been tested and found satisfactory by the University of Texas and other institutions. Single copy price \$4.80. Discounts offered to libraries and teachers. Available from the author at University Station, Austin 12, Texas, or from J. E. Maenpa, director, School of Graphic Arts, Hardin College, Wichita Falls, Texas.

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*Modern Annotated Forms of Agreement.* By Saul Gordon. 1598 pages. Legal forms of agreements. \$12.50. Prentice-Hall, Inc., 70 Fifth Avenue, New York 11, N. Y.

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"1947 Revisions to Official Methods of Analysis," looseleaf pages, 6" x 9" for insertion in binder with the Official Methods. Price of Revisions, fifty cents. Order from American Oil Chemists' Society 35 E. Wacker Drive, Chicago 1, Illinois.

"American Foundations and Their Fields", sixth edition, will be published in four quarterly sections. It contains information about policy, management, program, research, and evaluation on structure, etc., of non-profit organizations and foundations. Price \$6.00 for the complete volume. Published by Raymond Rich & William Cherin Associates, 30 East 22nd Street, New York 10, N. Y.

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"Fluorocarbons, Report PB-77290," Office of Technical Services, Department of Commerce, Washington 25, D. C. A report of research on the production of fluorine-substituted hydrocarbons, sponsored by the Office of Scientific Research and Development at Johns Hopkins during 1941 and 1943. Mimeographed. \$5.00.

#### **Katcher Chosen as Editor by Institute of Physics**

The American Institute of Physics, 57 East 55th Street, New York, N.Y., has appointed David A. Katcher as editor of its new semi-popular magazine on physics to be published early next year. The magazine, a monthly, has not yet been named.

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Dr. Raymond Szymanowitz, F.A. I.C., technical director, Acheson Colloids Corporation, Port Huron, Michigan, is author of "Colloidal Graphite—the Pioneer Additive", article in the September issue of *Industrial Trends*.

### New Horizons for Chemists

The flood of technical papers which has followed the lifting of Manhattan District censorship and the dispersion of the scientists engaged on the bomb project back into their university and corporation laboratories has given rise to the need for a clearing house publication for past, current, and future researches in this specialized field, which is not strictly physical, nor strictly chemical, nor wholly mathematically dominated. The new publication, *Nucleonics* (McGraw-Hill, first issue Sept. 1947,) is in the spirit of supplying this need.

The physicists have had the first whack at this field and have monopolized it in a beneficent sense, since the chemists did not protest, nor assert or exert themselves in this connection. The gradual dawning of the fact that isotopes of the same element have different chemical properties, and that chemistry is no longer limited by convention to phenomena taking place only in the outer electrons of atoms and molecules, automatically returns to the domain of chemistry a Pandora's chest of unsolved problems concerning isotopes, methods of their separation, identification and utilization.

In the October issue of *Nucleonics*, over half of the leading articles are of a chemical nature. Three of them have a definitely practical slant, namely, Isotope Techniques in Biochemistry (Norman S. Radin, National In-

stitute of Health), Tracer Isotopes in Metallurgy (J. K. Stanley, Westinghouse Electric Corporation), and Separation of Stable Isotopes (David W. Stewart, Eastman Kodak). There is also a report on the Notre Dame Symposium on Radiation Chemistry and Photochemistry which contains a wide range of papers dealing with radiation effects in various branches of inorganic and organic chemistry. A call to chemists is sounded in the opening article on "Some Problems for Study in Nuclear Chemistry", by Charles D. Coryell, Department of Chemistry, M.I.T., who in conclusion says in part:

"An effort has been made to show what problems are being currently attacked by chemists, specializing in nuclear chemistry, and how the general chemist can contribute to these problems. There is great need in the field for more correlation with conventional chemistry, and for the participation of more organic chemists, physical chemists, inorganic chemists, and chemical engineers in the efforts in nuclear chemistry, or in breaking down the barriers surrounding this field by taking some of the techniques into diverse fields."

Most of the techniques of conventional chemistry have already been borrowed from the kindred field of physics. With Lavoisier is associated the name of Laplace; with Bunsen, Kirchhoff; with Mme. Curie, Pierre Curie; and so, many fundamental dis-

coveries in chemistry have required the collaboration of a physicist to devise new methods of precision measurements. The new field of nuclear chemistry shows no remarkable departure from traditional procedure. The techniques are physical, just as they were in the case of the Lavoisier-Laplace calorimetry; Bunsen-Kirchhoff spectroscopy; and the Curies' measurements of radioactivity.

### Moore Becomes Director of Scientific Section

John C. Moore, F.A.I.C., has been appointed director of the Scientific Section of the National Paint, Varnish and Lacquer Association, Washington D. C. He was formerly superintendent of the Paint Plant of Sinclair Refining Company, Marcus Hook, Penna. During the war, he was a member of the Technical Advisory Committee of the Protective Coatings Section of the War Production Board.

The Milan International Trade Fair will be held in Milan, Italy, from April 12th to 27th. Applications for space should be sent to John B. Erskine., 135 So. La Salle Street, Chicago 3, Illinois.

General Motors on November 14th opened an extensive exhibit, at the Chicago Museum of Science and Industry, which portrays the fifty-year story of the automobile's development.

### Chemists Available

*Research development chemist.* Ph. D. 12 years' experience in organic syntheses, pharmaceuticals, amino acids. Available immediately. Please reply to Box 120, THE CHEMIST.

*Chemist.* F.A.I.C. Trained in the biological sciences. 12 years' experience including research, teaching, business, analytical and biological. Seeks employment near New York in supervising or technical sales. New car. Available after January. Please reply to Box 122, THE CHEMIST.

*Chemical Engineer,* P.E. license. 15 years' experience processing industries, fine and heavy chemicals. Plant design, process development, cost and economics, technical service. Will consider consultant basis. Location open, New York preferred. Please reply to Box 110. THE CHEMIST.



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**Bakelite Mexican Plant Opened**

Bakelite de Mexico, S.A., Sidar y Rovirosa 118, Mexico, D. F., Mexico, a subsidiary of the Bakelite Corporation, will begin operations this month with the opening of its plastic molding plant at Monterrey, N.L., Mexico. The plant will produce phenolic materials for electrical appliances, camera cases, housings and closures. Norman Meyer is managing director; Bruce Duffett, technical superintendent, and Herbert Brach, sales manager. Local labor will be employed.

Rutgers University, New Brunswick, N. J., announces that during the spring of 1948, it will graduate twenty-seven chemistry majors. It invites industrial firms who seek men of these qualifications to write to the Office of Personnel and Placement and make known their wants. Interviews will be arranged after December first.

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**Shaw Forms Consulting Firm**

Dr. William I. Shaw, F.A.I.C., formerly chief chemist, engineer, and plant superintendent of Silver Hill Products, Inc., Brooklyn, N. Y., is now director, chief chemist, and engineer of Shaw and Hamm, consulting chemists and engineers, 19 Hudson Street, New York 13, N. Y.

Dr. Alexander Schwarcman, F.A.I.C., research director of Spencer Kellogg & Sons, Inc., Buffalo, N.Y., spoke before the September 18th meeting of the New England Paint & Varnish Production Club, on the various developments, during the last ten years, in the application of wood oil, castor oil, linseed oil, and soya bean oil to the paint and varnish industry.

**Tauber with Public Health Service**

Dr. Henry Tauber, F.A.I.C., is now biochemist with the U. S. Public Health Service, Staten Island, New York, N. Y.

Dr. Gustav Egloff, F.A.I.C., participated in the Patents and Research Symposium of the National Association of Manufacturers, held December fifth at the Waldorf-Astoria Hotel, New York, N. Y. The panel discussion was on, "The Government's Position in the Research Field."

Edward L. Gordy, F.A.I.C., assistant to the general manager of research, Standard Oil Company of Indiana, 910 South Michigan Avenue, Chicago, Ill., has been appointed editor of *The Chemical Bulletin*, publication of the Chicago Section of The American Chemical Society. Mr. Gordy is a former editor of *The Chemist*.

The American Chemical Society has established a local section in Puerto Rico. Chairman of the Section is Dr. Fritz Fromm, professor of chemistry in the College of the Sacred Heart. Chairman-elect is Fernando Badrena, production engineer of the Puerto Rico Phosphate and Acid Works, Inc.

Thomas G. C. Hendy, chairman of Evans Chemicals, Ltd., of London, is in the United States for technical discussion with Evans Chemetics, Inc., of New York, N. Y., and to meet American cosmetics manufacturers who want to have their products manufactured in England for European distribution.

A recent Gallop poll indicates that fifty-nine per cent of those questioned believe that some other countries are already making atomic bombs; seventy per cent believe that the United States should continue to manufacture the bombs.

#### Additions to Bjorksten Staff

The Bjorksten Research Laboratories of Chicago announce that Miss Marian C. Stoffel, has joined the staff as technical secretary, and Mr. Harry DeWalt, Jr., as research chemist. Mr. DeWalt served three years during the war with the U. S. Signal Corps in the China, Burma, India Theater.

Dr. Gustav Egloff, F.A.I.C., spoke September fifth, on "Science in the Field of Petroleum Products," before the Assembly of Chicago Technical College. He also gave a radio address on the subject of "Synthetic Fuels," a talk sponsored by The American Chemical Society for the "Voice of America" program, which was broadcast to foreign countries in more than twenty languages.

The Alloy Steel Products Company, Linden, N. J., has appointed H. E. Johnson as Chicago district manager of the new sales office at 332 South Michigan Avenue, Chicago, Illinois.

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# Chemical Condensates

Ed. F. Degering, F.A.I.C.

Newton and his apple, Franklin and his kite, Stephenson and his tea-kettle: these are well-remembered stories from the First Readers of our youth that prove that the realm of research is not a barren land of lifeless equations and sterile charts. It's a land that stirs the imagination of young and old alike, a continent of limitless wonder where the story of a coffee bean is more thrilling than Jack and the Beanstalk . . . where a fast express train bridges the space of the mind with the enchanted power of seven league boots. New aids to health,

higher standards of living, and a better world to live in are the objectives of medical, industrial and chemical research.

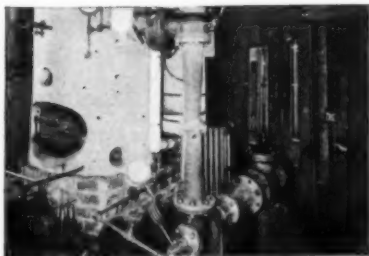
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"A trained, and, mind you, I say  
trained, scientific researcher thinks  
only of the object he has before him,  
not of any ideology, not of himself,  
not of his publicity, not of what any-  
body thinks of him or his associates,  
not of another job—but only of one

thing: What do the facts justify?"  
How helpful it would be if we could  
have more trained minds to see errors,  
to pass judgment and guide action  
before it is too late."

—Bernard M. Baruch

# Objectives of the American Institute of Chemists

To

Provide and enforce a code of conduct which merits public esteem and justifies confidence in the integrity of the chemist;

Establish and maintain a standard of proficiency of such excellence as to insure competent and efficient service;

Secure an adequate basic training for the profession, and admit to fellowship in the Institute only those of proved education, experience, competency, and character;

Strive to enhance the prestige and distinction of the profession so as to extend its influence and usefulness;

Establish and maintain a register of its membership in which there will be a complete record of the training experience, and fitness for service of each individual member;

Seek to improve the economic status of the profession of cooperating with employers and the public to secure a satisfactory appreciation and evaluation of the services of the chemist;

Provide a means for the appropriate recognition of distinguished service to the profession;

Cooperate with all agencies serving chemistry to make the profession of chemistry a powerful factor in the advancement of intellectual and material progress in the United States of America, to the end that this nation shall assume its rightful place as a leader among the nations of the world in scientific thought and accomplishment;

Lend support to the work of the chemical societies in the education of the public to a better appreciation of the contribution of the chemist to world progress; and

Render such other services to the profession as developments shall warrant and The American Institute of Chemists shall approve.

## *Merrie Christmas*



THIS is indeed a Merry Christmas for the Institute. Membership has increased rapidly in the past few months, indicative, we believe, of a growing appreciation of the importance of our objectives. Increases by months, when new members are voted on by the Council, have been: September 5 per cent, October 1.7 per cent, November 1.8 per cent.

Your officers and council wish you as individuals who make up the Institute

Season's Greetings

*Foster Dee Snell*



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